

CLAIMS

1. A method for recycling rubber-containing wastes, including thermal liquefaction of wastes fed into a reactor containing an organic solvent at a temperature above 270°C and a pressure up to 6 MPa, separation the liquid fraction from the undissolved product, distillation of the liquid fraction into the fraction with the boiling temperature below 220°C and the fraction with the boiling temperature above 220°C, characterized in that after feeding in a reactor a batch of wastes and an organic solvent thermal liquefaction is carried out at a temperature from 280°C to 435°C and a pressure at least 2.9 MPa, the organic solvent-waste weight ratio being more than 1.0, the liquid fraction with the boiling temperature below 220°C is subjected to catalytic reforming, a part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as the target product, and the remaining part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as a solvent and returned for thermal liquefaction of a new batch of wastes at a temperature of from 280°C to 435°C and a pressure at least 2.9 MPa, the solvent-waste weight ratio being more than 1.0, the liquid fraction, as obtained from the new batch of wastes, with the boiling temperature below 220°C is subjected to catalytic reforming, a part of the liquid fraction from the new batch of wastes, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as the target product, and the remaining part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as a solvent and once again returned for thermal liquefaction of a new batch of wastes, the process is continued in the said conditions of thermal liquefaction and catalytic reforming for the next and subsequent batches of wastes, while a part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C being once again returned for thermal liquefaction of subsequent batches of wastes.

2. The method according to Claim 1, characterized in that at the start-up alkyl benzene and/or the gasoline fraction having a boiling temperature below 220°C is used as an organic solvent.

3. The method according to Claim 1, characterized in that a part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is returned for thermal liquefaction of a new batch of wastes at a pressure in

the range from at least 2.9 MPa to not more than 5 MPa, the solvent-waste weight ratio being in the range from more than 1.0 to not more than 3.0.